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THE DISCOVERY OF THE GENUS *BOBEKOIDES* VAN ACHTERBERG (HYMENOPTERA, BRACONIDAE) IN CHINA, WITH DESCRIPTION OF ONE NEW SPECIES

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Abstract The genus *Bobekoides* van Achterberg, 1998 was discovered in China, and one new species, *B. sinicus* sp. nov. from Hubei, China is described and illustrated. A key to the species of the genus is provided. The type specimens are deposited in Beneficial Insects Institute, Fujian Agriculture and Forestry University, Fuzhou, China.
Key words Hymenoptera, Braconidae, Alysiinae, Alysiini, *Bobekoides*, new species, China.

The genus *Bobekoides* van Achterberg is a very small genus in the subfamily Alysiinae (Hymenoptera, Braconidae). Van Achterberg (1998) erected the genus based on *B. fulvus* van Achterberg from South Africa. From then on, this genus includes only 2 valid species, and both from South Africa. The biology of this genus is still unknown.

The genus *Bobekoides* is reported for the first time from China in this paper. One new species, *B. sinicus* sp. nov. is described and illustrated. A key to all species of the genus is also provided based on van Achterberg (1998). Type specimens are deposited in the Beneficial Insects Institute, Fujian Agriculture & Forestry University, Fuzhou, China.

For identification of the subfamily Alysiinae see van Achterberg (1993); for the terminology used in this paper see van Achterberg (1988).

Bobekoides van Achterberg, 1998 New Record for China

Bobekoides van Achterberg, 1998. *Zool. Med. Leiden*, 72 (9): 105 – 111. Type species: *Bobekoides fulvus* van Achterberg, 1998.

Diagnosis. Antenna of ♀ about 1.8 times as long as fore wing; third antennal segment shorter than fourth segment, and the former at most slightly widened (Fig. 6); face sculptured; clypeus and labrum distinctly protruding (Fig. 1); mandible distinctly widened dorsally, first tooth largest, second tooth rather acute, ventral lamella wide, third tooth distinct and with one indistinct protuberance (as "fourth tooth"; Fig. 4). Pronope round (Fig. 9). Base of vein 2-SR of fore wing curved (Fig. 5); vein M + CU of hind wing about 1.3 – 1.6 times as long as vein 1-M; vein 2-SR of fore wing equal to or longer than vein 3-SR; veins cu-a and m-cu of hind wing present (Fig. 5); vein CU1b of fore wing somewhat shorter than vein 3-CU1; hind wing without vein r; dorsope present (Fig. 7). Hind tibia compressed and sculptured. Second metasomal tergite longitudinally striate (Fig. 8); third tergite smooth; upper valve of ovipositor modified (flattened), enclosing lower valve apically; apex of ovipositor sheath without spine.

Distribution. Afrotropical (Southern Africa), Oriental (Central China).

Biology. Unknown.

Remarks. *Bobekoides* van Achterberg, 1998 is closely related to *Hylcalosia* Fischer, 1967, but differs from the latter in the (nearly) normal first flagellomere (Fig. 6) and in the smooth third metasomal tergite (Fig. 8). *Bobekoides* is also closely related to *Separatus* Chen & Wu, 1994, but *Separatus* has a dorsal incision in the upper lobe of the mandible, both the central and ventral teeth of the mandible are slender and acute, the medio-posterior depression of the mesoscutum is short and pit-like (Figs 37. 1 – 5 in Chen & Wu, 1994). As to van Achterberg, 1998, it also resembles the genus *Bobekia* Niezabitowski, 1910, but *Bobekia* differs from *Bobekoides* in having no deep emargination between the first and second tooth of the mandible, the clypeus less and roundly protruding, the base of vein 2-SR of fore wing straight, and the metanotum acutely protruding dorsally.

Key to species of the genus *Bobekoides* van Achterberg.

1. Eye shorter than temple in dorsal view, or of equal length (0.8 – 1.0 times); vein cu-a of fore wing distinctly postfurcal, vein 1r-m of hind wing about as long as vein 1-M of hind wing; length of first tergite 1.2 – 1.3 times as long as its apical width ..... ***B. microps* van Achterberg**
Eye longer than temple in dorsal view (about 1.5 times) (Fig. 2); vein cu-a of fore wing interstitial or slightly postfurcal, vein 1r-m of hind wing is distinctly shorter than

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vein 1-M of hind wing; length of first tergite 0.8 – 1.0 times as long as its apical width 2

2. Head somewhat transverse and medial-longitudinal line from stemmaticum to hind verge of head indistinct; side of pronotum largely crenulate-rugose; metanotum with a long median carina; propodeum with a strong median carina on anterior half of it; r issuing distinctly behind middle of pterostigma, vein m-cu of hind wing interstitial; hind tibia strongly compressed; whole second tergite with longitudinal striates ..... ***B. fulvus* van Achterberg**

Head distinctly transverse and medial-longitudinal line from stemmaticum to hind verge of head distinct (Fig. 2); side of pronotum mainly smooth (Fig. 12); metanotum with a short median carina anteriorly (Fig. 9); propodeum with a median carina on anterior one-third of it (Fig. 9); r issuing nealy from middle of pterostigma, vein m-cu of hind wing just postfurcal (Fig. 5); hind tibia slightly compressed; several striates surround to make a (sub) cordiform shape on the medial area of the base of second tergite (Figs 7 – 8) ..... ***B. sinicus* sp. nov.**

***Bobekoides sinicus* sp. nov.** (Figs 1 – 12)

Holotype ♀, length of body 3.3 mm, of fore wing 3.1 mm.

Head. Antenna with 47 segments 1.7 times as long as fore wing, third segment 0.7 times as long as fourth segment (Fig. 6), third, fourth and penultimate segments 2.5, 4.4 and 2.3 times as long as its width, respectively; apex of scape somewhat oblique and pedicel medium-sized (Fig. 6); maxillary palp long and 1.4 times as long as the height of head; OOL : OD : POL = 22 : 5 : 7; frons glabrous, transversely rugose, slightly convex medially (between antennal socket and front ocellus), with a elliptic concave below front ocellus (Fig. 1); head somewhat transverse and temples nealy parallel-sided behind eyes (Fig. 2); in dorsal view, eye 1.5 times as long as temple (Fig. 2); face transversely rugose, protruding medially, with a long medio-longitudinal elevation (Fig. 1); anterior tentorial pits medium-sized, far removed from eye; malar space nearly absent; mandible 3-lobed and ventral carina somewhat protruding, median length 1.7 times as long as its maximum width (Figs 3 – 4).

Mesosoma. Length of mesosoma 1.5 times as long as its height; lateral part of pronotum smooth (Fig. 12); precoxal sulcus finely crenulate and absent on the posterior part of mesopleuron (Fig. 10); metapleuron rugulose-punctate irregularly, with some crenulate rugae on ventral part; notauli short and finely crenulated, restricted to declivous fore part of mesonotum (Fig. 9); medio-posterior depression of mesoscutum present on posterior three-fifths of mesoscutum, crenulate and reaching to posterior verge of mesoscutum (Fig. 9); main part of mesoscutum glabrous and smooth; scutellar sulcus wide, deep and finely crenulated; scutellum relatively flat and sparsely with some hair; with a short median carina on the anterior part of it, and the posterior part of metanotum slightly protruding (Fig. 9); surface of the anterior part of propodeum mainly smooth and the remaining part rugose, and there is a median carina on the anterior part (about one-third) of it, the medial area present but indistinctly subpentagon (Fig. 9).

Wings. Fore wing: vein 1-SR relatively long (Fig. 5); vein r: 3-SR: SR1 = 1: 4: 10; vein r issuing nealy from the middle of pterostigma (Fig. 5); vein SR1 straight (Fig. 5); vein cu-a slightly postfurcal (right wing) or interstitial (left wing); vein 2-SR: 3-SR: r-m = 10: 10: 7; vein 1-CU1: 2-CU1 = 2: 17; vein m-cu strongly converging to vein 1-M. Hind wing: vein M + CU: 1-M = 9: 7; vein m-cu quite weak and just postfurcal (Fig. 5); vein 1r-m: 1-M = 5: 7.

Legs. Hind coxa smooth; tarsal claws medium-sized, shorter than arolium (Fig. 11), basal protuberance absent; length of femur, tibia and basitarsus of hind leg 4.4, 9.1 and 5.1 times as long as its width, respectively; hind femur punctulate; hind tibia rugulose, slightly compressed and densely with long setose; hind tibial spurs 0.31 and 0.26 times as long as hind basitarsus, respectively; fore tarsus 1.3 times as long as fore tibia.

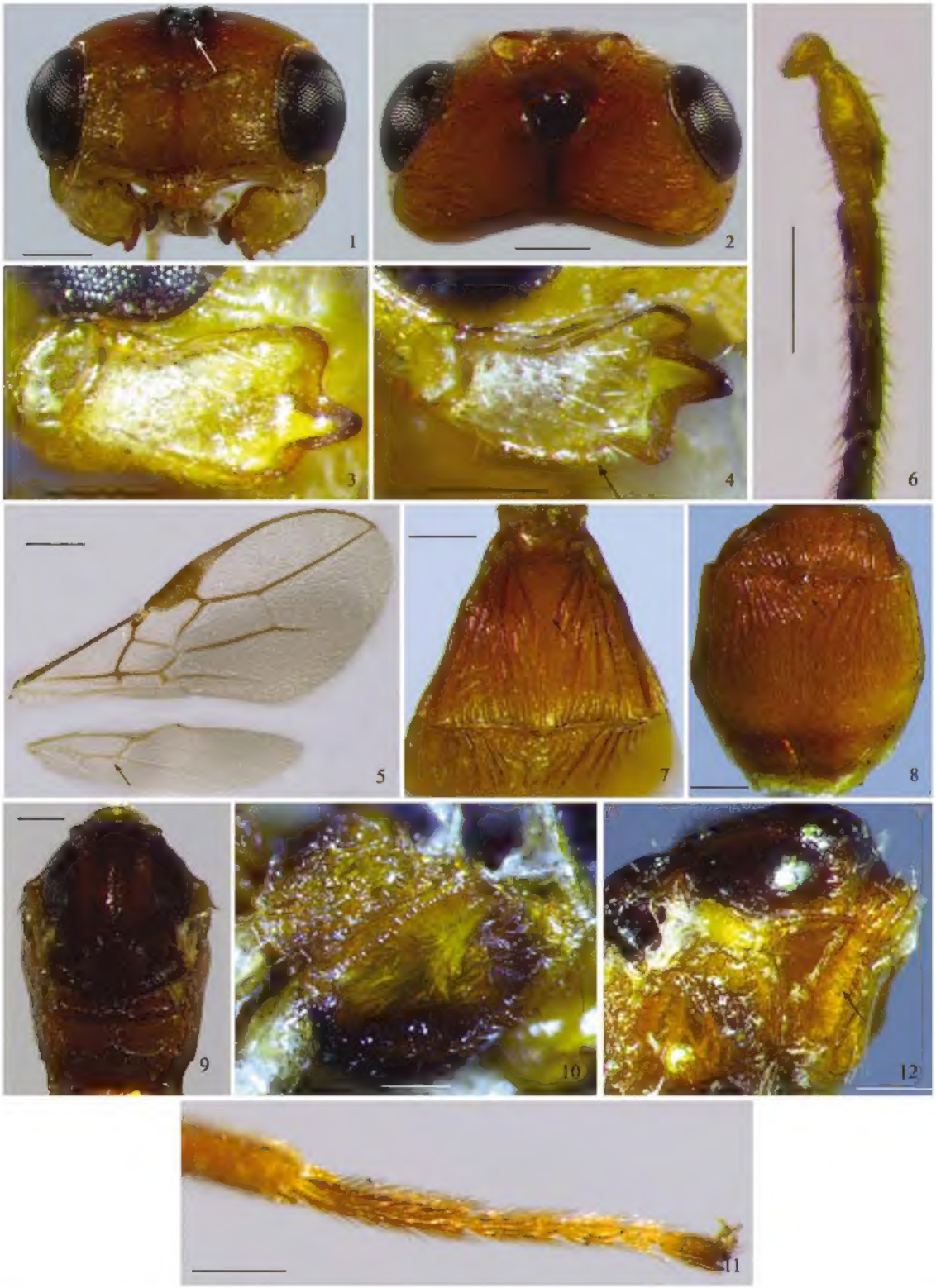
Metasoma. Length of first tergite 0.9 times as long as its apical width, its surface striate coarsely and regularly, its dorsal carinae complete and two weak branch join in the apical half part of the first tergite (Fig. 7); dorsope large and deep (Fig. 7); second tergite mainly and densely with longitudinal striates, but several striates surround to make a (sub) cordiform shape on the medial area of the base of second tergite (Figs 7 – 8); third tergite smooth (Fig. 8); ovipositor straight; ovipositor sheath 0.56 times as long as fore wing; hypopygium medium-sized and it apical part truncate.

Colour. Head (except for black stemmaticum), 1st and 2nd antennal segments (3rd – 4th segments yellowish-brown and remaining part of antenna black brown) and legs yellow; veins and pterostigma, ovipositor (but ovipositor sheath blackish-brown), metasoma yellowish-brown; precoxal sulcus rusty brown; metanotum, propodeum yellowish-brown; mesonotum, mesosternum blackish-brown.

Male. Unknown.

Holotype ♀, Honghua, Shennongjia, Hubei Province, 4 Aug. 2000, SHI Quan-Xiu. Paratype 1♀, Honghua, Shennongjia, Hubei Province, 4 Aug. 2000, HUANG Ju-Chang.

Remarks. This new species resembles *B. fulvus* van Achterberg, but can be discriminated from the latter by: 1) head distinctly transverse (Fig. 2); 2) median carina of metanotum short (Fig. 9); 3) side



Figs 1 – 12. *Bobekoides sinicus* sp. nov., ♀, holotype. 1 – 2. Head. 1. Frontal view (arrow: an elliptic concave below front ocellus). 2. Dorsal view. 3 – 4. Mandible. 3. Maximum view on 1st tooth. 4. Maximum view on 3rd tooth (arrow: ventral carina somewhat protruding). 5. Wings (arrow: vein m-cu of hind wing quite weak and just postfurcal). 6. First to fourth antennal segments. 7 – 9. Dorsal aspect. 7. First to second metasomal tergites (arrow: two weak branch join in the apical half part of T1). 8. All metasomal tergites (arrow: a (sub) cordiform shape on the medial area of the base of second tergite). 9. Mesosoma. 10. Mesopleuron and metapleuron. 11. Tarsus and claw. 12. Mesosoma, lateral view on front aspect (arrow: side of pronotum mainly smooth). Scale bars: 1 – 4, 6 – 12 = 200 μm; 5 = 500 μm.

of pronotum mainly smooth (Fig. 12); 4) hind tibia not strongly compressed; 5) several striates surround to make a (sub) cordiform shape on the medial area of the base of second tergite (Figs 7 – 8).

Biology. Unknown.

Etymology. The specific name is derived from Greek "*Sino*", referring to Chinese.

Distribution. Known only from Hubei Province (Central China) and South Africa.

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REFERENCES

Achterberg, C. van. 1983. A revision of the genus *Hylcalosia* Fischer (Hymenoptera, Braconidae, Alysiinae). *Zool. Med. Leiden*, 57: 81 – 90.

Achterberg, C. van. 1988. Revision of the subfamily Blacinae (Hymenoptera: Braconidae). *Zool. Verh. Leiden*, 249: 1 – 324.

Achterberg, C. van. 1993. Illustrated key to the subfamilies of the Braconidae (Hymenoptera: Ichneumonoidea). *Zool. Verh. Leiden*, 283: 1 – 189, 1 – 66.

Achterberg, C. van. 1998. *Bobekoides* gen. nov. (Hymenoptera: Braconidae: Alysiinae) from South Africa. *Zool. Med. Leiden*, 72 (9): 105 – 111.

Chen, J-H and Wu, Z-S 1994. The Alysiini of China (Hymenoptera: Braconidae: Alysiinae). China Agricultural Press. 132 – 133, Figs 37 (1 – 5).

Fischer, M. 1967. Seltene Alysiinae aus verschiedenen Erdteilen. *Annalen des Naturhistorischen Museums in Wien*, 70: 109 – 138.

中国近波贝茧蜂属新纪录及一新种记述（膜翅目，茧蜂科）

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摘 要 记述采自中国湖北的近波贝茧蜂属 *Bobekoides* van Achterberg 1 新种，中华近波贝茧蜂 *B. sinicus* sp. nov.。文中对近波贝茧蜂属及新种进行了详细的描述，编制了该属世界已知种的检索表，新种附有鉴别形态特征图，并与其近似种作了比较。新种模式标本保存于福建农林大学益虫研究所。

关键词 膜翅目，茧蜂科，反颚茧蜂亚科，反颚茧蜂族，近波贝茧蜂属，新种，中国.

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